

IN THE US PATENT AND TRADEMARK OFFICE

In re Application of:

KOMEM et al.

Serial No.: 09/597,461

Filed: 19 June 2000

For: SYSTEM AND METHOD FOR
MULTIPLE CURRENCY
TRANSACTIONS

Examiner: M.A. CUFF

Commissioner of Patents and Trademarks
Washington, D.C. 20231
USA



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Attorney
Docket: 24393
Previously E02/1

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AFFIDAVIT UNDER 37 CFR 1.132

I, Yuval Tal, am the Chief Executive Officer of E4X Ltd. at Tel Aviv, Israel. I have a first degree and a Master's degree in Engineering, which I received from Tel Aviv University, Israel. My professional specialization is in the field of online commercial transactions. I have attached a copy of my curriculum vitae with some of the technical fields in which I have practical experience.

I am an inventor of the present Application. I have read the Application and the new and amended claims, as well as the Office Action from the Examiner and the accompanying references. In support of the accompanying Response to this Office Action, I have provided additional details concerning the operation of the present invention.

Briefly, the present invention relates to a system and method in which the price is guaranteed both to the buyer *in the buyer's local currency*, and to the seller *in the seller's local currency*. In order to provide such a guarantee without a loss to the buyer, the seller and/or to a third party (such as a credit card company for example), the claimed system and method of the present invention require a non-trivial implementation.

As a non-limiting example of such an implementation, I have prepared an overview of an exemplary implementation of the E4X system and method. This non-limiting example uses hedging, which is a preferred embodiment of the present invention, to guard against losses due to exchange rate fluctuations. Hedging is the process of establishing a position in a financial market, which is equal and opposite to a transaction made on an actual or physical market. The system of the present invention (E4X system) aggregates multiple physical transactions, comprising obligations for receiving payment in different local currencies, and corresponding commitments by the E4X system to exchange and remit amounts to merchants in base currencies. By taking equal and opposite future positions to the aggregated physical positions in the Interbank currency exchange market, risk of loss due to fluctuation of currency exchange rates is minimized.

To highlight the benefits of the application, I have provided descriptions of message and money flows for 3 possible scenarios which support an e-Commerce transaction between a seller and buyer operating in different currencies: (1) the transaction is conducted in the seller's currency, (2) the transaction is conducted in the buyer's currency and (3) an exemplary hedged multi-currency payment transaction performed according to the present invention. For purposes of illustration, I assume a United Kingdom (UK) based cardholder purchases and pays by credit card for goods sold at a US based e-Commerce site and that the US based merchant has a 100 USD (US dollars) ticket price for the goods sold at his site.

The first scenario is the method in most common practice. The US vendor sets up an account with his acquiring bank (bank which holds the bank account of the US vendor) to accept payments in USD. The USD 100 price tag is displayed to all buyers at his site. The UK buyer pays USD 100 with his credit card. The buyer's issuing bank (bank holding the credit card of the buyer) will receive a demand for USD 100 from the card network, the bank will convert this to GBP (Great Britain pounds sterling) and debit the buyer's current account with an amount in GBP. Upon settlement, USD 100 (less processing fees) are deposited by the

acquirer into the vendor's USD bank account. Disadvantages of this method are: (1) The buyer does not know at the time of purchase the exact amount that will be debited from his account, providing a common reason for chargeback (cancellation by buyer) of credit card transactions; (2) Currency conversion takes place several days after the transaction, increasing exposure to rate fluctuations; (3) The foreign exchange margin (typically 2-3%) on the transaction is earned by the foreign issuing bank.

For the second scenario, the US vendor needs to establish acquiring (bank) accounts in each of the currencies he wishes to support at his site. He would need to independently price his goods in each of the supported currencies: USD 100, GBP 75, EUR 96, etc. The GBP 75 price tag is displayed to UK buyers at his site. The UK buyer pays GBP 75 with his credit card. The buyer's issuing bank will receive a demand for GBP 75 from the credit card network, with no conversion by the bank, and the buyer's current account is debited with GBP 75. On settlement, GBP 75 (less processing fees) are deposited by the acquirer into the vendor's GBP bank account. Disadvantages of this method are: (1) The merchant is exposed to currency exchange rate fluctuations; (2) Merchant needs to setup multi-currency bank accounts; (3) Merchant needs to perform multi-currency book keeping; (4) Merchant needs to manage actual exchange of funds.

The system of the present invention hedges the transaction to ensure that the US based merchant receives the full \$100 USD ticket price for the transaction. The US vendor still needs to establish processing accounts for each of the currencies he wishes to support at his site, but settlement in multiple currencies is made to bank accounts in the E4X system. The e-Commerce site requests an exchange rate table from the E4X server (server of the present invention) according to a pre-agreed schedule. The USD 100 ticket price is dynamically converted to the buyer's local currency and GBP 76 is displayed to the UK buyer. The UK buyer pays GBP with his credit card. The buyer's issuing bank will receive a demand for GBP 76 from the card network, no conversion by the bank and the buyer's current account is

debited with GBP 76, the exact price advertised for the goods at the vendor's site. On settlement, GBP 76 (less processing fees) are deposited by the acquirer into a GBP bank account managed by the E4X system. The E4X system converts the GBP to USD 100 (less processing fees), which are deposited into the vendor's USD bank account. Advantages of this method are: (1) Neither the buyer or seller are exposed to currency exchange rate fluctuations; (2) The price displayed to the buyer is the exact amount debited from his account; (3) The currency exchange is moved to the acquiring side, allowing the vendor to earn extra revenue on the exchange margin or to pass savings onto the buyer; (4) The vendor is able to avoid the accounting and administrative overheads associated with holding bank accounts in multiple currencies.

The method of the present invention preferably requires that for each payment transaction that is authorized and submitted via a credit card processor to the credit card payment process, information about the transaction, including an identifier of the rate applied and amounts in both of the buyer's and the seller's currencies, be submitted to the system of the present invention. This system reconciles purchase amounts with totals for funding reported by the processor, applying specific currency related treatment for fees, refunds, multiple captures, chargebacks and other transaction scenarios encountered in the payment flow. Settled amounts in local currency are then received, and the e-Commerce site receives a remitted base currency payment which can be reconciled with the individual USD values of each purchase at the site.

As can be seen from the above description, even guaranteeing the price for a single transaction is not simple, given the complicated operational flow. The present invention also provides other features, according to preferred embodiments including dynamic calculation and hedging of exchange rates from multiple rate sources, and definition of margins per merchant for multiple base currencies and payment types with configurable update and expiry periods. This flexibility allows the present invention to hedge a wide range of e-commerce

scenarios including subscriptions and/or other types of multiple payment scenarios, which could not possibly be handled by the background art teachings as these teachings do not provide protection against currency rate fluctuations.

The system also preferably provides transaction management, which is a preferred embodiment of the present invention. According to this embodiment, transaction infrastructure components manage the transaction life cycle of a payment from authorization to remittance, providing reconciliation and aggregation services and supporting multiple transaction types including refunds, fees and charge-backs. The server interfaces with multiple transaction sources by implementing specific drivers, which inherit functionality from core transaction services. The generic design of transaction services allows the system of the present invention to convert and hedge payments using multiple online payment methods and processing schemes, including credit/debit cards, direct debit, ACH, checks, stored value, micro-payments and others.

As the globalization of commerce increases, particularly through the Web, participants to commerce transactions are becoming increasingly aware of the need to have transparent risk-free currency conversion functionality built into payment flows. Such a requirement is emphasized in the article, "Dynamic Currency Conversion" in issue 782 of the Nilson report (attached to this Affidavit), which explains that through the late 1990's, merchants absorbed all of the risks of currency conversion. It has only been quite recently that an attempt to distribute such risks has been made. Thus, at the time of filing of the present Application, the concept of hedging risks in order to protect both the vendor and the buyer from currency exchange risks was not known, nor was calculating the price at the time of sale, such that the exact price (without currency risks) was known to both vendor and the buyer *at the time of sale*.

The present invention provides this capability by supplying guaranteed rates for dynamic conversion of prices, generating physical currency positions from aggregated sales

data and hedging these positions for the life-cycle of a transaction. The solution provided by the present invention could not have been obtained from the teachings of Reeder, that billing amounts can be dynamically converted using a rate table, and those of Garber, that the foreign exchange spot market facilitates the exchange of currency between two parties. The present invention addresses the problem of currency fluctuation risk for online transactions for e-commerce, which did not exist at the time of either Reeder's or Garber's teachings. The present invention also bridges two unrelated fields of electronic commerce and foreign exchange trading. Furthermore, hedging a physical transaction before it takes place (by providing rates for dynamic conversion of displayed prices) cannot be deduced from Garber, which discusses hedging of currency transactions; such hedging by its nature occurs after the physical transaction has taken place. Furthermore, aggregation of multiple transactions to generate a combined physical position, which can then be managed for currency risk, is not taught by the existing art.

I hereby certify that the above facts and statements are true and complete, to the best of my knowledge.



Yuval Tal

Date: 5/25/03

Yuval Tal - CV

Work

Experience:

| <u>Position</u> | <u>Institution</u> | <u>Business Description</u> | <u>Years</u> |
|----------------------|---|--|--------------|
| CEO | E4X Inc | Service for enabling multi-currency e-commerce, by providing guaranteeing currency exchange rates to the online point-of-sale | 2000-2003 |
| General Manager | R-U-Sure, Ltd | Online shopping cooperation services | 98-99 |
| Manager | RADWARE Ltd | Radware solutions guarantee the full availability and complete security of IP applications across enterprise and carrier networks. | 97-98 |
| Product Line Manager | Lucent Technologies (previously Lannet) | Provider of multi layer switching products | 96-97 |
| R& D Product Manager | Scitex | software and hardware solution for the prepress industry | 93-96 |
| Education: | | | |
| M.Sc. | Tel Aviv University | Engineering with a minor in Business Administration | 92-96 |
| B.Sc | Tel Aviv University | Engineering | 88-92 |

THE NILSON REPORT

FOR 32 YEARS, THE LEADING PUBLICATION COVERING CONSUMER PAYMENT SYSTEMS WORLDWIDE

DYNAMIC CURRENCY CONVERSION

Bank card transactions involving cardholders with accounts denominated in a currency other than the merchant's currency generated more than \$930 million in revenues from foreign exchange (FX) conversion fees for Visa and MasterCard last year. Card issuers ... (turn to page 5)

PROTECTING WEB TRANSACTIONS

Firewalls are designed to stop intruders from getting into a corporate network (see issue 770), but some get through anyway. A complimentary solution that offers a higher level of security encrypts all sensitive Web activity from end to end, from remote Web browsers ... (turn to page 4)

BANKRUPTCY DEBT RECOVERY — PART 2

Bankruptcies filed by consumers and businesses in the United States last year totalled 1,577,651, of which 1,539,111 (97.6%) were personal. Those filings generated \$18.19 billion or 30% of the \$60.40 billion in total charge-offs by credit card issuers ... (turn to page 6)

WING R NIXD RF DEPOSIT MODULE

Latest enhancement for WinCor-Nixdorf ProCash ATMs lets customers deposit 50 bills or checks in one continuing transaction through a single slot, making this the only deposit model on the market that can accept this quantity of cash and/or checks at one time. (turn to page 4)

LINUDIX P S TERMINALS

Last year, Linudix shipped 7,000 handheld wireless POS terminals in Korea. This year the company is exporting its products, including newly available wired terminals, to other countries in Asia, as well as to Latin America. Linudix terminals use Linux, a free, Unix-type (turn to page 5)

NACHA PAYMENTS 2003

The Electronic Payments Association conference will be held April 27-30 at the Orlando World Center Marriott in Orlando, Florida. Topics include: streamlining workers compensation with automated ... (turn to page 4)

Spending at Merchants

Top 10 U.S. Issuers Ranked by Purchase Volume — 2002

| RANK | ISSUER | VOLUME (BIL.) |
|------|------------------|---------------|
| 1 | American Express | \$233.00 |
| 2 | Citigroup | \$167.15 |
| 3 | Bank One | \$135.67 |
| 4 | MBNA | \$105.06 |
| 5 | Bank of America | \$89.40 |
| 6 | JPMorganChase | \$75.19 |
| 7 | Discover | \$73.07 |
| 8 | U.S. Bancorp | \$53.05 |
| 9 | CapitalOne | \$48.75 |
| 10 | Wells Fargo | \$39.43 |

*Spending based on a sample of debit and credit card holders' purchases. Data not included for prepaid volume.

SPENDING AT MERCHANTS

Both Visa and MasterCard were bigger than American Express based on spending at the point of sale by brand last year, but Amex remained the single largest issuer.

Individual issuers connected to the bank card associations trailed American Express even though their figures included both Visa and MasterCard credit and debit card purchase volume (excludes cash). Amex had no debit card purchase volume. Neither did the other ... (turn to page 5)

INSIDE: Credit Cards On-line
2003 — 4 Best Firms — 23

CARDS ASIA 2003: April 23-25 in Surin City, Singapore. Cost for the three-day conference is \$2,225. Subscribers to *The Wilson Report* will receive a 20% discount by contacting Yee-Lien Tan at Terroplan, (601) 6322-2701, yeehian.lam@terroplan.com.

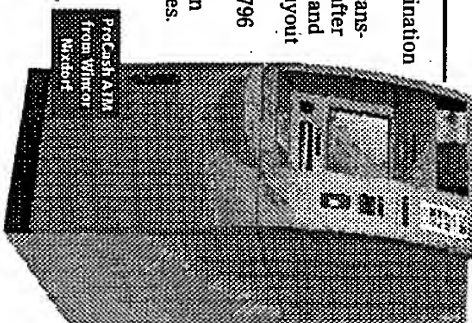
ETIAS Electronic Benefits Transfer Industry Council's "Card Technology Forecast: 2004-2008" will be held May 6 at the Hilton Crystal City in Arlington, VA. Members pay \$155. Others pay \$225. Register at www.etiaa.org.

CREDIT CARDS N-LINE 2003 The annual conference of the Livermore Research Group will be held April 10 at the Copley Marriott in Boston. Speakers represent Citibank, Chase, and Advanta. Topics include: privacy notices and opt-out forms on-line, suppressing e-statements and paper statements, on-line dispute resolution, e-mail address databases, Web site organization and navigation, Verified by Visa and virtual number implementations, on-line payment registration, improvements in transaction reporting, on-line new-account applications, e-mail alerts and confirmations, mobile phone access, and multichannel cross-selling via paper, e-mail, and Web site. Cost of the conference is \$395. Subscribers to *The Nilsson Report* will receive a 20% discount by contacting Paul Sant at Livermore Research (781) 431-1100, paul.sant@livermoreresearch.com. ❖

Protecting Web Transactions (from page 1) ... across the Internet to internal databases inside the firewall. Ingrian Networks uses patent-pending technology to secure the cryptographic data and locks the encryption keys on a separate secure platform. This means that if an intruder does get past a firewall, any stolen data will not be readable or usable. Ingrian has more than 30 customers in the U.S. and Europe including government agencies, financial institutions, and health-care organizations. Franklyn Jones is Head of Marketing at Ingrian Networks, Inc. in Redwood City, California, (650) 261-2471, franklyn@ingrian.com. ❖

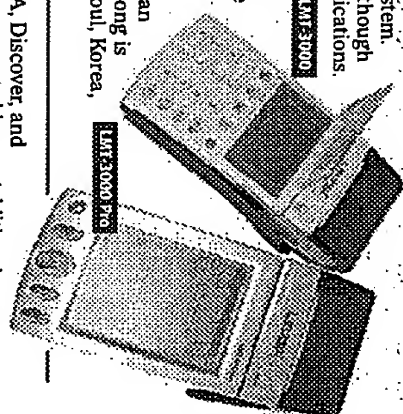
NACHA Payments (from page 1) ... disbursements, fraud detection and prevention, reducing ACH credit risk with real-time authorization, growth trends in Web and telephony payments, marketing direct deposits and direct payments nationally, sending one-time payments through the ACH, identity theft, fundamentals of electronic billing and payment, recent developments in electronic payments law, B2B electronic invoicing and payments, combating money laundering, on-line bill payments and EBPP markets, purchasing cards in the global supply chain, convergence of ACH/checks/EFT risk and opportunities, using biometrics to increase debit card use, fraud protection for on-line merchants, new technologies in retailer-based loyalty and payments, on-line authentication, electronic collection of payments from multiple billing systems, consumer reaction to check conversion, and global money transfers. Cost for the four-day conference is \$945 for members, \$1,095 for nonmembers. Subscribers to *The Nilsson Report* can register at the member price by contacting NACHA Member Services at (703) 561-1100. ❖

Wincor Nixdorf (from page 1) ... Currency is verified by denomination when deposited, and then authenticated. Checks are scanned, imaged, and recorded. Both are returned immediately if the transaction is cancelled. Wincor-Nixdorf ranks third in the world, after NCR and Diebold, by shipments of newly manufactured ATMs and CDs. The company was formed in 1999 when management buyout specialist Kohlberg Kravis Roberts partnered with GS Capital Partners, the private equity unit of Goldman Sachs, and paid \$796 million to acquire the retail and banking systems businesses of Siemens. Today the company's ATMs/CDs are manufactured in Germany. Wincor-Nixdorf employs 4,600 people in 70 countries. Javier Lopez-Bartolome is Executive VP at Wincor Nixdorf International GmbH in Paderborn, Germany, 49 (5251) 653-5900, javier.lopez-bartolome@wincor-nixdorf.com. Prior issues: 777, 702. ❖



Linux POS Terminals (from page 1) operating system. The source code for Linux is available to anyone, although companies and developers may charge fees for applications.

The LMT-3000 and LMT-3000 Pro shown here are PDA-type devices with touch screens. They use a 32-bit microprocessor and meet security requirements for encrypted debit transactions. The back-lit display can be delivered with characters in any language. Both devices come with built-in thermal printers, wireless modems, battery packs, and earphone jacks. Linudix is interested in being an OEM supplier and is looking for partners. James Bong is Marketing Manager at Linudix Company, Ltd. in Seoul, Korea, 82 (2) 3482-0991 ext. 215, james@linudix.com. ❖



Spending (from page 1) ... nonbank issuers — MBNA, Discover, and CapitalOne. Not all card spending at merchants is represented here. Additional purchase volume was generated when PINs were used with debit cards issued by Citibank, Bank One, Bank of America, JPMorganChase, U.S. Bancorp, and Wells Fargo. That volume would not alter these rankings. ❖

Dynamic Currency Conversion (from page 1) ... marking up the associations' FX service raised the amount of fees passed on to cardholders by another \$2.30 billion to \$2.70 billion. Poised to capture 50% or more of that total revenue over the next five years are acquirers, merchants, and FX risk-management specialists using dynamic currency conversion. DCC software can be installed in a stand-alone POS terminal, ECR, or PC-based point-of-sale system, or it can be integrated into the platform of a multicurrency processor. Unlike the currency exchange service provided by Visa and MasterCard, which takes place after a transaction has been authorized in the merchant's local currency, a dynamic currency conversion occurs before the transaction is authorized in the cardholder's local currency. (See box to the right.)

DCC will be a significant source of future revenue to acquirers worldwide — particularly those in the U.S. Without it, they earned \$3.76 billion from the processing of more than \$1.12 trillion worth of Visa/MasterCard credit and debit card purchase volume in the U.S. last year. Dynamic currency conversion would have added another \$400 to \$530 million. That additional revenue would come from the acquirer's one-third share of the 3% to 4% currency conversion fees applied to the \$40 billion in Visa/MasterCard volume generated by international cardholders at airlines, cruise lines, car rentals, restaurants, upscale specialty shops, and Web sites. Total FX revenue would have ranged from \$1.20 billion to \$1.60 billion, with the remaining two-thirds going to merchants and FX risk-management specialists. (See FX Management for DCC on chart on page 9.) (turn to page 8)

How It Works: Software recognizes the currency of a cardholder's home country by comparing the card number against a table of bank identification numbers stored in the terminal at a payment gateway, or integrated into a processor's platform. When the currency has been established, a foreign exchange conversion rate is downloaded to the point of sale. Cardholders are then given the option of concluding the transaction in their native currency or waiting for the conversion to be applied later by their card issuer. Ninety percent of cardholders choose to pay in their local currency up front. Those merchants able to justify the cost of adding DCC, apply it to their POS systems will receive between 50 and 125 basis points of the converted amount as a commission. Most merchants accept settlement in their local currency without any treasury risk from the foreign exchange.

Bankruptcy (from page 1) ... last year. Bankruptcies fall into four categories, of which only Chapters 7 and 13 apply exclusively to personal filings.

The recovery model shown here deals only with the \$15.13 billion worth of Chapter 7 filings and the \$2.84 billion worth of Chapter 13 filings. Over the next five years, the credit card industry can expect to recover only 1.67% of the \$18.19 billion in charge-offs from personal bankruptcy filings last year. Chapters 11 and 12, business and personal farm-related bankruptcy filings combined cost issuers another \$220 million in charge-offs.

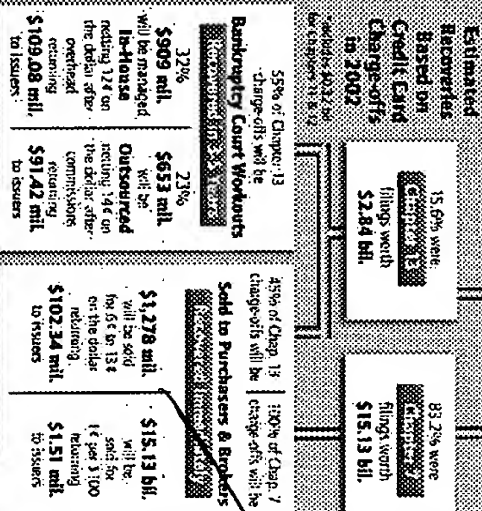
Chapters. Under Chapter 13, filers retain more assets by agreeing to pay creditors all or

How Card Issuers Could Benefit from Converting Chapter 7 Filings to Chapter 13 Filings

| Conversion | Amount (in millions) | Percent |
|------------|----------------------|---------|
| Chapter 7 | \$15.13 | 0.13% |
| Chapter 13 | \$2.84 | 0.13% |
| Total | \$17.97 | 0.13% |
| Chapter 7 | \$15.13 | 0.13% |
| Chapter 13 | \$2.84 | 0.13% |
| Total | \$17.97 | 0.13% |

*Based on Chapter 7 charge-offs of \$15.13 billion in calendar year 2002.
**Net recovery in Chapter 13 charge-offs average 13% of the dollar.

BANKRUPTCY RECOVERY MODEL



All Card Issuers in the U.S. Charged-off \$18.19 bl. from personal bankruptcy filings*

Recoveries will total an estimated \$304.25 mil. (1.67%) of charge-offs to Personal Bankruptcies

part of their outstanding debt over a period of three to five years. Under Chapter 7, filers are required to give up nonexempt property to trustees who sell it to pay off creditors. Exempt property includes assets considered necessary to support the debtor and dependents including equity in a house.

Recoveries. Chapter 7s account for 83% of the dollar value of all bankruptcy filings. Issuers recover almost nothing from them because bankruptcy courts wipe out the books or discharge most to creditors. Issuers are able to sell these practically worthless charge-offs at 1¢ per \$100 to firms that specialize in finding errors and fraud in bankruptcy petitions, and then pursue that debt in court.

Gross recoveries from Chapter 13 filings paid out of bankruptcy court workbooks range from 18¢ to 26¢ on the dollar, but only on the 65% of plans that are completed. Issuers only net an average 13¢ on the dollar (for total Chapter 13 filings) over three to five years after deducting overhead for in-house and/or outsourced collection efforts. This amount can slightly exceed the net amount issuers recover from nonbankruptcy charge-offs over the same period using in-house and outside services. This is because the whereabouts of all petitioners are known, and the power of the bankruptcy courts helps creditors.

Chapter 13 bankruptcy debt can also be sold to purchasers and brokers. These

buyers are reimbursed by bankruptcy court trustees within five years. Purchasers and brokers pay more for bankruptcy debt than nonbankruptcy debt for which they have to handle all of the collection work themselves. Card issuers are increasingly willing to sell Chapter 13 charge-offs at a discount, settling for a lower return than they would get from collection efforts in order to get immediate cash up front.

Bankruptcy Reform. Issuers might begin to look differently at selling bankruptcy charge-offs versus in-house and outsourced collection efforts if more Chapter 7 filings could be converted to Chapter 13s. Potential revenue gains are indicated in the chart shown here. The House Judiciary Subcommittee overseeing bankruptcy reform is promising to revive legislation that would help issuers with their Chapter 7 losses.

Industry Contacts. Over 35 collection agencies and law firms purchase and service Chapter 13 bankruptcies. The three major purchasers of Chapter 13 debt are led by the **Max Recovery** subsidiary of Bear Stearns, the nation's sixth largest security firm ... **B-Line**, which also bought 80% of all Chapter 7s sold in the United States last year ... and **Sherrin Financial**, which purchases 13s through their wholly owned subsidiary **Resurgent Capital Services**.

Services include **Becker & Lee**, which manages collections for **Max Recovery** ... the law firm of **Weinstein Treiger & Riley**, which is used by B-Line to process both 7s and 13s, and is one of the largest providers of bankruptcy services for most of the top 20 card issuers in the nation and for large department stores ... **Creditors Bankruptcy Service**, which pioneered recovery of bankruptcy debt in 1983, and serves major credit-grantors and department stores ... **TSYS**, which acquired the bankruptcy debt-management business of Wallace and DeMayo in 1999, and owns the nation's largest legal collection debt network and services bankruptcies for both pur-

chasers and creditors ... and **National Capital Management**, a privately owned company that acquires bankruptcy debt from regional credit issuers. **Dolan Information** is the leading provider of bankruptcy notification and case filing updates, providing information to over 75% of the nation's debt buyers and software companies. Prior issues: 799, 699, 681, 667, 638, 667, 526, 522, 489, 437

Credit Card Bankruptcy Recovery

| Debt Buyer | Debt Servicer |
|--|--|
| Max Recovery/efast Settlement Tim Sappelhof is Managing Director in New York, New York (212) 222-9554. jsappelhof@max.com | Becker & Lee Managing Attorney in Mahan, Pennsylvania (610) 644-7800, (212) 222-9554. leeb@beckerlee.com |
| Sherrin Financial Anish Shah is Director in New York, New York (212) 922-1616, anish@sherrin.com. B-Line: Full Cardco is COO in Seattle, Washington (206) 269-3490, info@bline.com. | Weinstein Treiger & Riley William Weinstein is President in Seattle, Washington (206) 269-3490, wtr@wtr.com. Creditors Bankruptcy Services Larry Alberson is VP Marketing in Dallas, Texas (972) 644-1127, larry@creditors.com. |
| Sherrin China & Adams Douglas Sherrin is President in Rochester Hills, Michigan (248) 652-8200. jserrin@sherrin.com | TSYS Debt Management Christopher Lund is SVP in Norcross, Georgia (770) 453-7699, jolde@tsys.net. |
| Thruvan Resolutions John Johnson is President in Nashville, Tennessee (615) 383-1334. jjohnson@thruvan.net | DOXUS CR Software Vib Dook is VP Sales & Marketing in Fairfax, Virginia (703) 934-9060. vib@crsoftware.com. |
| MasterCard Int'l. Catheline Catheline is VP Risk Products in St. Louis, Missouri (636) 722-6100. catheline@mastercard.com. | Dolan Information (formerly Bank) Patrick Clue is CVP Sales & Marketing in Minneapolis, Minnesota (612) 215-7461. patrick@dolaninformation.com. |
| Vista USA Stephen Holiga is VP Advanced Risk Solutions in San Francisco, California (650) 432-1164, holiga@vista.com. | Bancorp/Concord Sean McVey is Managing Director of Kee, Boyette & Woods in New York (212) 887-7765, smcovey@bkw.com. |
| London Bridge Group Janet Haynes is Administrator in Norcross, Georgia (770) 810-8101. mhaynes@lbg.com. | Ricardo Klipartick Ricardo Klipartick is President of Klipartick & Associates in Auburn Hills, Michigan (248) 377-0700, rklipartick@aunh.com. |
| First Data Corp's Lawcan Lawcan is a product of its Ecommerce Group subsidiary in New York. Kathy Skermer is Product Manager (212) 751-9700. kathy.skermer@firstdata.com. | John Park John Park is a Chapter 13 Consultant in Memphis, Tennessee (901) 758-5766, (212) 751-9700. jpark001@firstdata.com. |

Dynamic Currency Conversion (from page 5)

The closed-loop systems operated by American Express, JCB, and Diners Club — systems in which the card company is both the issuer and the acquirer — won't be negatively affected by DCC at first. Eventually, however, merchants, particularly those in the travel and entertainment segment, can be expected to consider DCC revenue as a right to which they are entitled, and begin to demand their share from JCB, and Diners Club business travelers will also want to take advantage of DCC. Transactions originated in local currency allow for speedier reimbursement of T&E expenses.

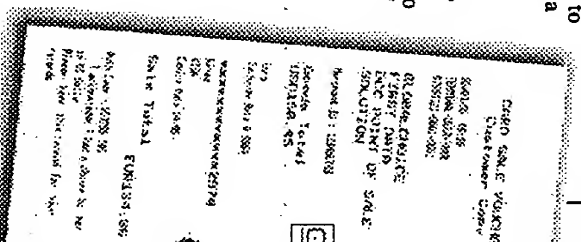
History

Dynamic currency conversion had its beginnings in the Caribbean region in the 1970s when merchants converted local currency to U.S. dollar accounts, often charging cardholders very high fees in the process. These excesses led the associations to offer a stable, global FX service. Multicurrency processing grew in the mid- to late 1990s in Europe at select multinational car rental agencies, hotels, and retailers. These merchants wanted to receive settlement in a single currency, along with centralized reporting for transactions processed in multiple currencies. Currency conversion platforms had to be deployed, and merchants absorbed the FX risk. Soon, U.S.-based Web merchants saw the value of advising international e-commerce customers about the price for goods and services in the cardholder's own currency, leading to multicurrency processors to adapt their systems. The next step came when cardholders who had been informed of a sale's equivalent amount in their own currency then

wanted to pay with that currency rather than the merchants. Further adaptations were made, but the FX conversions were still supplied on the back-end after authorization, and in the merchant's rather than the cardholder's currency. Cardholders were notified that currency conversion would be supplied by the merchant rather than their card issuing bank, but they were not given an exact amount for their transaction inclusive of currency conversion fees.

OmniPay Dynamic currency conversion at the point of sale lets cardholders pay for purchases in their own currency and tells them exactly what they will pay inclusive of all currency conversion fees. The existing Visa and MasterCard currency conversion method averages 3.5% including issuer markup. Although few of the FX vendors supplying dynamic currency conversions at the point of sale or Web sites operate with the same bulk rate discounts the associations receive, most base their FX markup on the rates established daily by the Visa and MasterCard interbank settlement systems. More often than not, cardholders can expect as good or even a slightly better FX price from DCC than they get from the existing association method. They will certainly get better disclosure of conversion fees.

Visa International New Rules Visa has been more aggressive than MasterCard about establishing operating regulations that govern dynamic currency conversion. Rules call for cardholders to be given a printed receipt containing amounts in both the merchant's and their local currency, the exchange rate used, the symbols for both currencies, as well as text explaining that cardholders are being offered a choice and that their choice is final. Merchants can't perform DCC without cardholder approval, and DCC receipt totals ... (turn to page 9)



Dynamic Currency Conversion/Multicurrency Processing Contacts

- MultiCurrency Systems for Acquirers**
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- MultiCurrency Systems (Bank)**
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Bank of Ireland (See Acquirers)
Bank of NT Butterfield (See Acquirers)
Citibank (See Acquirers)
Credit Mutual (See Acquirers)
H5BC (See Acquirers)
Royal Bank of Scotland (See Acquirers)

Dynamic Currency Conversion (from page 9) ... must match charges on a cardholder's statement. Substantial fines are in place for violations. Prior issues: 780, 745, 732, 720, 717, 714

ISSUERS/ASSOCIATIONS VS. ACQUIRERS/MERCHANTS. When Visa and MasterCard supply currency conversions, 100% of the FX fee and any markup stays within the bank card industry. Under dynamic currency conversion, acquirers will take one-third of FX-related revenue, but two-thirds will leave the bank card industry and be split between the FX-conversion supplier and the merchant. As a result, both card issuers and the associations will lose revenue. The associations could make up some of that loss by raising assessment fees, and issuers could surcharge international transactions at DCC-enabled merchants even though they did not supply an FX service. Issuers will have to do something. Loss of revenue from DCC comes just as several countries are imposing cuts in interchange fees, and as members in all countries prepare to shift liability for Internet transactions from the merchant to the issuing bank.

Bank Card Currency Conversion

Example: A foreign cardholder pays for a \$155 product and service at a \$100 merchant with 3% DCC. The cardholder pays an additional 4% FX fee to the bank. The bank's net revenue is \$15.50 (100% of the \$155 product and service) minus the 3% DCC fee (\$4.65) and the 4% FX fee (\$6.25) equals \$44.60. The bank's net revenue is \$44.60.

| Existing Visa/MasterCard Method | | | |
|---------------------------------|--|---|---------|
| | COLLECTED | PAID | NETTED |
| Issuing Bank | \$5.80 4.0% FX fee from cardholder plus 1.8% merchant fee | \$1.00 1.0% DCC fee from cardholder | \$4.80 |
| Acquiring Bank | \$2.00 2.0% discount fee from merchant | \$1.85 1.0% DCC fee from merchant and assessment fee from issuer | \$0.15 |
| Bank Card Association | \$2.85 1.0% FX fee from bank plus 1.8% merchant fee from the issuer | \$1.80 100% interchange fee to issuer | \$1.05 |
| Merchant | \$100.00 Net collected | \$2.00 2.0% discount fee to acquire | \$98.00 |

| Dynamic Currency Conversion | | | |
|------------------------------|---|---|---------|
| | COLLECTED | PAID | NETTED |
| Issuing Bank | \$1.80 1.8% merchant fee from issuer | \$0.00 | \$1.80 |
| Acquiring Bank | \$6.00 6.0% discount fee from merchant | \$4.15 1.8% interchange fee from merchant and assessment fee from issuer | \$2.15 |
| FX Provider | \$2.00 2.0% FX fee from merchant | \$1.00 1.0% DCC fee from merchant | \$1.00 |
| Bank Card Association | \$1.85 1.8% merchant fee from issuer | \$1.80 100% interchange fee to issuer | \$0.05 |
| Merchant | \$101.00 product and item charges plus 1% bank fee | \$2.00 2.0% discount fee to acquire | \$99.00 |

DCC is good for all merchants serving international cardholders, but U.S. merchants stand to gain the most since the American business travel and entertainment market is the largest in the world. However, U.S. merchants also face the most challenges, this due to the fact that they have more outlets and that those outlets often cross time zones. FX rates can fluctuate hourly.

FX AND DCC SOFTWARE VENDORS have spent tens of millions of dollars to develop the systems needed for DCC because they see the huge profit potential. Those systems perform the following functions: they switch transactions in real time ... identify international transactions before the authorization request was made ... manage the foreign exchange rate tables ... match up charge back and retrieval requests ... print all FX conversion data on a receipt ... provide funding to the merchant ... or reports to acquirers so that they can fund merchants ... reconciliation and reporting for all FX transactions ... and manage the FX exposure for all transactions by tying the authorization amount to the clearing file. ❖

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David Robertson
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